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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/577,232	05/23/2000	Lundy Lewis	APB-022	3633

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EXAMINER

ENGLAND, DAVID E

ART UNIT	PAPER NUMBER
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2143

DATE MAILED: 10/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/577,232	Applicant(s) LEWIS, LUNDY	
	Examiner David E. England	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 31-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 31-59 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>07/14/2006</u> <i>DE</i> | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 31 – 59 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 31, 32, 34 – 36, 38 – 43, 45 – 47, 49 – 51, 53 – 57 and 59 are rejected under 35 U.S.C. 102(e) as being anticipated by Glitho et al. (6233449) (hereinafter Glitho).**

4. As per claim 31, as closely interpreted by the Examiner, Glitho teaches a method of providing service level management of a business process in connection with a computer network, wherein the business process is supported by a service operated on the computer network, wherein the service is supported by at least one network component within the computer network, wherein the service is to be provided at an agreed upon service level, and wherein a measure of performance of the service indicates a current service level of the business process, the method comprising, (e.g., col. 4, lines 10 – 28 & col. 4, line 55 – col. 5, line 40):

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5. measuring a component parameter of the at least one network component, the component parameter indicating an operational characteristic of the at least one network component, (e.g., col. 4, line 55 – col. 5, line 40);

6. determining a service parameter representative of a measure of performance of the service, the service parameter having a state used to determine conformity of the service to the agreed upon service level, (e.g., col. 4, line 65 – col. 5, line 40); and

7. determining an effect of the measured component parameter on the state of the service parameter, (e.g., col. 5, lines 12 – 54, “*run multiple simulations*”).

8. As per claim 32, as closely interpreted by the Examiner, Glitho teaches determining an effect the component parameter has on the service parameter, the determination comprising one or more of:

9. a data mining based process;

10. a neural network based process;

11. a machine learning based process;

12. an iterative dichotomizing third derivative based process;

13. an algorithm based process, (e.g., col. 4, line 65 – col. 5, line 29, “*calculations to detect*” & col. 7, lines 21 – 45, “*Different types of correlation algorithms...*”); and

14. a selected statistical based process.

15. As per claim 34, as closely interpreted by the Examiner, Glitho teaches the service parameter represents one or more of:

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16. a response time of a network resource;
 17. traffic congestion of a selected portion of the network, (e.g. col. 1, line 43 – col. 2, line 29 & col. 4, line 55 – col. 5, line 40);
 18. availability of a network resource;
 19. reliability of a network resource, (e.g. col. 1, line 43 – col. 2, line 29 & col. 4, line 55 – col. 5, line 40);
 20. security of a network resource;
 21. performance of a network resource, (e.g. col. 1, line 43 – col. 2, line 29 & col. 4, line 55 – col. 5, line 40); and
 22. configuration of a network resource.
23. As per claim 35, as closely interpreted by the Examiner, Glitho teaches the network component is associated with a network component monitoring agent of a network management system, (e.g., col. 4, line 65 – col. 5, line 40, “*Action Proposal Agent (APA)*”).
24. As per claim 36, as closely interpreted by the Examiner, Glitho teaches determining interfaces between the network component and the network component monitoring agent, (e.g., col. 4, line 65 – col. 5, line 40, “*Action Proposal Agent (APA)*” and “*Link performance, Hardware performance, System performance*”).

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25. As per claim 40, as closely interpreted by the Examiner, Glitho teaches storing the plurality of component parameters associated with the one or more network entities in a storage device, (e.g., col. 5, line 41 – col. 6, line 35).

26. As per claim 41, as closely interpreted by the Examiner, Glitho teaches managing the network based on the state of the service indicated by the service parameter, (e.g., col. 4, line 65 – col. 5, line 40).

27. As per claim 42, as closely interpreted by the Examiner, Glitho teaches instructing the one or more network entities addressable by the network to take an action based on the state of the service indicated by the service parameter, (e.g., col. 4, line 65 – col. 5, line 40).

28. As per claim 43, as closely interpreted by the Examiner, Glitho teaches interfacing with a management platform associated with the network to manage the service associated with the network, (e.g., col. 4, line 65 – col. 5, line 48 & col. 5, line 63 – col. 6, line 44).

29. Claims 38, 39, 45 – 47, 49 – 51, 53 – 57 and 59 are rejected for similar reasons stated above.

Claim Rejections - 35 USC § 103

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30. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

31. Claims 33 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glitho (6233449) in view of Hunter (6449603).

32. As per claim 33, as closely interpreted by the Examiner, Glitho does not specifically teach representing an effect of the component parameter on the service parameter, wherein the representation includes one or more of:

33. decision tree;

34. propositional statement;

35. quantified statement;

36. weighted listing;

37. graph.

38. Hunter teaches representing an effect of the component parameter on the service parameter, wherein the representation includes one or more of:

39. decision tree;

40. propositional statement;

41. quantified statement;

42. weighted listing;

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43. graph, (e.g. col. 1, line 9 – col. 2, line 64 & col. 7, line 60 – col. 8, line 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Hunter with Glitho because it would be more efficient for a system to utilize types of algorithms and/or statistical applications to train a system to predict outcomes of events utilizing what is most likely to happen, (i.e. statistical data, example choosing a chores of action that happens 90% of the time rather than the action that happens 10% of the time).

44. Claim 48 is rejected for similar reasons as stated above.

45. Claims 37, 44, 52 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glitho (6233449) in view of Yemini et al. (6249755) (hereinafter Yemini).

46. As per claim 37, as closely interpreted by the Examiner, Glitho does not specifically teach the service level management domain comprises a plurality of management applications integrated into a hierarchical structure having a plurality of layers.

47. Yemini teaches the service level management domain comprises a plurality of management applications integrated into a hierarchical structure having a plurality of layers, (e.g. col. 2, lines 6 – 46 & col. 7, lines 8 – 60). It would have been obvious to one of ordinary skill in the art at the time the invention was conceived to combine Glitho with Yemini because it would be advantageous for a system to have a type of monitoring agent on more than one layer of the OSI network model to monitor information that other layers are incapable of monitoring.

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48. Claims 44, 52 and 58 are rejected for similar reasons as stated above.

Response to Arguments

49. Applicant's arguments filed 07/12/2006 have been fully considered but they are not persuasive.

50. **In the Remarks**, Applicant argues in substance that Glitho fails to disclose at least the feature of “*determining an effect of [a] measured component parameter on [a] state of [a] service parameter,*” as set forth in independent claims 31 and 46. The measured component parameter is indicative of an operational characteristic of at least one network component. The state of the service parameter is used to determine conformity of a service supported by the service to an agreed upon service level. Furthermore, Applicant states that Glitho describes a reactive system for detecting performance degradation/QOS degradation, finding a suspected cause, and attempting to implement solutions. Where in contrast, the claimed invention relates to a proactive method that determines an effect of parameters of service-supporting network components on a service level.

51. As to the first Remark, Examiner would like to draw the Applicant's attention to the above remarks they have stated. The actual limitation that is stated is, “*determining an effect of the measured component parameter on the state of the service parameter.*” The Applicant further states that the measured component parameter is indicative of an operational characteristic of at least one network component. Applicant does not state what the parameter or

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characteristic could be. Therefore, it is the Examiners interpretation that this part of the claimed invention could be what is stated in column 4 of Glitho, *"Raw data may come from traffic data 34 or exchange data 35, and include, for example exchange and cell configuration and performance data,"* all of which can be interpreted as operational characteristics of at least one network component. Furthermore, Applicant discusses that the state of the service parameter is used to determine conformity of a service supported by the service to an agreed upon service level. In other words, the agreed upon QUALITY OF SERVICE. When one sets up a QOS, it is expected that the network "conform" or at least meet the agreed upon quality of the service that is given to a network node. Glitho teaches such a limitation as stated in column 7, *"where the performance data is analyzed for quality of service at 74, and if a predefined threshold is crossed, or otherwise interpretation of state of an agreed upon service, an event may be generated indicating that levels of expected QOS have not been reached."* The Applicant further goes to state in the claim limitation, "determining an effect of the measured component parameter on the state of the service parameter," which is found later in column 7 and 5 of Glitho. Glitho goes to describe how the analyzed data causes the system to "pin-point a root cause." This can be interpreted as an "effect" from the parameter on the state. It is very apparent that the prior art reads on the broad limitations of claims.

52. Furthermore, Examiner does not see how the claimed invention is "proactive" when all the applicant does in the independent claim is take measurements of network components, determine a state used to "determine a conformity" and then "determine an effect" using the two. There is nothing that would suggest that the claimed invention is any different from the prior art.

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53. All other Remarks can be addressed by the above argument.

54. Applicant's arguments, see Remarks pages 10 and 11, filed 07/12/2006, with respect to Claim Objections and 112 Rejections have been fully considered and are persuasive. The Objections and 112 Rejections have been withdrawn.

Conclusion

55. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David E. England whose telephone number is 571-272-3912. The examiner can normally be reached on Mon-Thur, 7:00-5:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on 571-272-3923. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

David E. England
Examiner
Art Unit 2143

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